

Listing of Claims

1 (Currently Amended). A circuit for processing [[an]] a received audio signal including an input stage for receiving the received audio signal and an output for presenting a processed audio signal, comprising:

a signal source providing the received audio signal having positive and negative wave portions;

first and second input stages having substantially identical nonlinear performance curves, the first input stage receiving the received audio signal, and the second input stage receiving an inverse of the received audio signal, the first and second input stages ~~further including control points that are~~ having operating characteristics selected such that of the positive and negative wave portions, one of the portions is processed substantially nonlinearly and the other of the portions is processed substantially linearly; and

a difference amplifier receiving the processed portions from the first and second input stages and producing the processed audio signal.

2 (Original). The circuit of claim 1, wherein the first and second input stages comprise passive circuits for generating the nonlinear performance curves.

3 (Original). The circuit of claim 2, wherein the passive circuits comprise diodes.

4 (Original). The circuit of claim 1, wherein the first and second input stages comprise amplifiers having nonlinear performance curves.

5 (Original). The circuit of claim 1, wherein an inverter circuit provides the inverse input signal for the second input stage.

6 (Original). The circuit of claim 1, wherein the difference amplifier is operated in a linear range.

7 (Original). The circuit of claim 1, wherein said circuit has a high input impedance for uncoupling it from the signal source.

8 (Original). The circuit of claim 1, wherein said circuit is cascaded to achieve a greater dynamic signal compression.

9 (Original). The circuit of claim 1, in which the signal source includes an electrical musical instrument.

10 (Currently Amended). The circuit of claim 1, in which the processed audio signal has a headroom that is at least about 6 dB greater than a headroom of the received audio signal.

11 (Currently Amended). A method comprising:

receiving an input ~~audio~~ signal having ~~positive and negative wave portions~~ a first polarity portion and a second polarity portion;

inverting the ~~audio~~ input signal, thereby generating an inverted ~~audio~~ signal having a first polarity portion and a second polarity portion;

processing ~~one~~ the first polarity portions of the ~~audio~~ input signal and the inverted ~~audio~~ signal substantially linearly;

processing ~~the other~~ the second polarity portions of the ~~audio~~ input signal and the inverted ~~audio~~ signal substantially nonlinearly; and

whereby the processing steps result in a processed input signal and a processed inverted signal, both of which having linearly processed first polarity portions and nonlinearly processed second polarity portions; and

forming a difference between the processed ~~audio~~ input signal and the processed inverted ~~audio~~ signal, thereby generating a ~~processed audio signal~~ difference signal.

12 (Currently Amended). A method according to claim 11, wherein the processing step are performed in accordance with different respective control points of the same performance curve.

13 (Previously Presented). A method according to claim 11, wherein the processing step are performed passively.

14 (Previously Presented). A method according to claim 11, wherein the audio signal is generated by an electrical musical instrument.

15 (Previously Presented). A method according to claim 11, further comprising:

repeating the receiving, the inverting, both processing, and the forming steps, wherein the processed audio signal is used as the input audio signal in the repetition of the steps.

16 (Currently Amended). A system comprising:

a means for receiving an input ~~audio~~ signal having ~~positive and negative wave~~ portions a first polarity portion and a second polarity portion;

a means for inverting the ~~audio~~ input signal, thereby generating an inverted ~~audio~~ signal having a first polarity portion and a second polarity portion;

a means for processing ~~one~~ the first polarity portions of the ~~audio~~ input signal and the inverted ~~audio~~ signal substantially linearly;

a means for processing ~~the other~~ the second polarity portions of the ~~audio~~ input signal and the inverted ~~audio~~ signal substantially nonlinearly; ~~and~~

whereby the processing steps result in a processed input signal and a processed inverted signal, both of which having linearly processed first polarity portions and nonlinearly processed second polarity portions; and

a means for forming a difference between the processed ~~audio~~ input signal and the processed inverted ~~audio~~ signal, thereby generating a ~~processed audio signal~~ difference signal.

17 (New). A method according to claim 11, wherein the first polarity wave portion is a positive wave portion and the second polarity wave portion is a negative wave portion.

18 (New). A method according to claim 11, wherein the first polarity wave portion is a negative wave portion and the second polarity wave portion is a positive wave portion.

19 (New). A system according to claim 16, wherein the first polarity wave portion is a negative wave portion and the second polarity wave portion is a positive wave portion.

20 (New). A system according to claim 16, wherein the first polarity wave portion is a positive wave portion and the second polarity wave portion is a negative wave portion.